

DETAILED ACTION

Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

2. The disclosure is objected to because of the following informalities:

A) A heading for each section has not been included. The Office suggests Applicant to insert a heading in each section of the specification; the section headings are as follows:

Background of the Invention.

Brief Summary of the Invention.

Brief Description of the Drawing(s).

Detailed Description of the Invention

Abstract of the Disclosure.

each of the headings should appear in upper case, without underlining or bold type, as section headings. See MPEP § 601.

B) In page 1, "This application claims the benefit of U.S. provisional application serial no. 60/528,635, filed December 12, 2003, which the entire subject matter is incorporated herein by reference" should be corrected to reflect that this application is a national stage entry of PCT/IB04/52735 filed 12/09/2004 which claim priority of the above provisional application.

Claim Objections

3. Claims 1, 8, 10-12, 14 and 24-26 are objected to because they include reference characters (i.e., 252, 254) which are not enclosed within parentheses. Appropriate correction is required.

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Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

4. Claims 9 and 10 are objected to because of the following informalities: In claims 9 and 10, line 1, respectively, "The system" should be replaced with --The method-- since claims 9 and 10 are dependent over method claim 8. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6, 13-18 and 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Mirskiy et al. (US 5,973,455, submitted by applicant).

Re claims 1, 4, 14, 15 and 17, Mirskiy discloses a system and method for lamp type determination for an electronic ballast (i.e., electronic ballast including lamp type determination) comprising:

means (i.e., microprocessor 51 and driver 38) for heating a lamp filament by applying a voltage at a first frequency to the lamp filament (Figs. 1-3; abstract; Col. 3, line 9 - Col. 4, line 64);

means for measuring (i.e., resistor 22 or 72) filament characteristics of the heated filament, wherein the measuring filament characteristics of the heated filament is performed by

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a method selected from the group consisting of measuring lamp filament current, measuring lamp filament resistance, and measuring lamp filament voltage (Figs. 1-3; abstract; col. 3, lines 9-45); and

means for determining (i.e., microprocessor 51) lamp type from the measured filament characteristics (Figs. 1-3; abstract; Col. 3, lines 9-45; Col. 4, lines 1-64; wherein the means for determining (i.e., microprocessor 51) further comprises memory (i.e., means for storing the determined lamp type)).

Re claims 2, 5, 13, 16, 18 and 23, the means for determining (i.e., microprocessor 51) is also a means for updating lamp operating parameters to suit the determined lamp type; means for comparing the determined lamp type to a stored lamp type; and a means for providing indication if the determined lamp type is not correct for the electronic ballast (Figs. 1-3; abstract; Col. 3, lines 9-45; Col. 4, line 1- Col. 5, line 7).

Re claim 3, the lamp operating parameters are selected from the group consisting of a dimming curve, maximum operating current, minimum operating current, operating frequency, and operating current as a function of frequency for a given dimming level (abstract; Col. 4, lines 62-64).

Re claim 6, the stored lamp type is selected from the group consisting of a preceding determined lamp type and a weighted average of previously determined lamp types (abstract; Col. 4, lines 62-64).

Re claims 24-26, Mirskiy discloses an electronic ballast with lamp type determination, the electronic ballast providing power to a lamp filament (11) (Figs. 1-3), the electronic ballast comprising:

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a filament current sensing circuit (i.e., resistor 22 or 72) operably connected to the lamp filament and generating a sensed filament current signal (Figs. 1-3; abstract; Col. 3, lines 9-45); and

a microprocessor (51) receiving the sensed filament current signal and operably connected to control the power to the lamp filament (Figs. 1-3; abstract; Col. 3, lines 9-45; Col. 4, lines 1-64; wherein the microprocessor (51) includes memory and is programmed to store the determined lamp type in the memory; programmed to heat the lamp filament by applying the power at a first frequency, measure filament characteristics, and determine lamp type from the measured filament characteristics; and further programmed to update operating parameters for the electronic ballast to suit the determined lamp type).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7-9, 11, 12, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mirskiy et al. (US 5,973,455, submitted by applicant) in view of Keggenhoff et al. (US 6,525,479, submitted by applicant).

Re claim 7, Mirskiy does not disclose re-checking the determined lamp type if the determined lamp type is different than the stored lamp type.

In the same field of endeavor, Keggenhoff teaches of re-checking the determined lamp type if the determined lamp type is different than the stored lamp type for the purpose of

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permitting accurate determination of the lamp type (Figs. 3, 4; abstract; Col. 2, lines 13-22; Col. 6, line 29- Col. 7, line 16).

It would have been made to one having ordinary skill in the art at the time the invention was made to modify the system and method for lamp type determination for an electronic ballast (i.e., electronic ballast including lamp type determination) of Mirskiy by re-checking the determined lamp type if the determined lamp type is different than the stored lamp type for the purpose of permitting accurate determination of the lamp type as taught by Keggenhoff.

Re claim 8, 9, 11, 12, 19 and 21, although, Mirskiy show the means for measuring the filament characteristics of the heated filament comprising: means for applying the voltage at the first frequency to the lamp filament for a first predetermined time; means for measuring a first filament current at the first predetermined time (Figs. 1-3; abstract; col. 3, lines 9-45), Mirskiy does not show the means for measuring the filament characteristics of the heated filament comprising: means for applying a second voltage at a second frequency to the lamp filament for a second predetermined time; and means for measuring a second filament current at the second predetermined time.

In the same field of endeavor, Keggenhoff discloses a means for measuring a filament characteristics of a heated filament comprising: means for applying (i.e., control device 4) first and second voltages at first and second frequencies, respectively, to a lamp filament for first and second predetermined times; means for measuring (i.e., measuring device 10 including measured value analyzer 6) first and second filament currents at the first and second predetermined time, respectively, for the purpose of permitting accurate determination of the lamp type (Figs. 3-5; abstract; Col. 2, lines 13-22; Col. 6, line 29- Col. 7, line 48).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the means for measuring the filament characteristics of the heated filament of Mirskiy by providing a second voltage at a second frequency to the lamp filament for a second predetermined time; and measuring a second filament current at the second predetermined time as taught by Keggenhoff for the purpose of permitting accurate determination of the lamp type as taught by Keggenhoff.

Allowable Subject Matter

9. Claims 10, 20 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ortmeier (US Pub. 2002/0117976); and Li et al. (US 5,969,483); also teach similar inventive subject matter.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EA

9/15/08

/Douglas W Owens/

Supervisory Patent Examiner, Art Unit 2821

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